

COLUMN FOR JANUARY 11, 2003.  
HEADLINE; ATTIC CONDENSATION

*Q; I was in our attic recently, its an older home and there appears to be drops of water hanging from the ends of the nails that protrude thru the wood from the shingles I suspect. This has me a little concerned, any suggestions?*

A: This is the time of the year when evidence of a lack of ventilation really shows up in an attic. I have been in a number of attics in the winter and a heavy layer of frost is actually covering the roof decking material. This generally means the lack of an air/vapour barrier and inadequate ventilation. In an older home there are a number of things you can check and then improve as needed. I would start with a real good review of the attic itself for air leakage. Openings around the plumbing vents, electrical wiring, chimneys and light fixtures create a natural stack effect into the attic and will cause some of the condition you describe. The spray foam that you can purchase at any hardware or lumberyard works well here. Buy the window style of spray, it is a lower pressure, is easier to use and does not expand as much. Carefully foam in the openings but pass on the light fixtures. Light fixtures emit a surprising amount of heat. Here I would buy some 18 gauge metal, form a box around the fixture portion that is in the attic, seal the edges with silicone and then cover the outside of the box with insulation. You described your home as older, so I will have to assume that there is no air/vapour barrier. Condensation caused by vapour diffusion through permeable materials is common in an older residence. While there are some "vapour barrier" paints on the market and I would think they work as advertised, two coats of any oil based paint on the ceiling works just about as well and I would guess is probably cheaper. Take your time and apply heavy even coats and allow full dry time between coats. If there is any dampness in the ceiling materials, oil based paint generally takes a dislike to this. If it turns yellow on application, stop and wait until the spring. Proper insulation is a great help but it can be overdone if correct ventilation is not done at the same time. In an older home, I usually recommend 9" in the attics of older homes. New home specs are 12", but this is part of the building envelope system. You are never going to have the air management of a new home so why waste the extra money on insulation you will not likely receive the full benefit from. The attic hatch is one area that a lot of people miss. Here a properly fitted opening, foam weather-stripping around the opening box and a hatch door that has the equivalent R factor of rigid foam insulation attached to it, equivalent to what is installed in the attic is a must. Over half of the homes I inspect have poor access hatches installed or the insulation is a bat that has been laid over the hatch door and is not fitted properly. Quite often you can tell by the mildew that has grown on the decking above the hatch door that moisture is leaking thru the hatch.

While we try our best to control moisture invasion into the attic, you will not contain it all, even a newer home. Proper attic ventilation is your second step. Installation of ridge or gable vents is a good idea. If this is an older home with a steep pitch roof it is unlikely with the building construction that you will get a good soffit opening. Try for gable vents, one at each end of the roof. Turbine vents are good for older homes too. They do work when passive ventilation is limited by construction designs. I have received a number of questions recently on air leakage control and I have a good supply of booklets on that very subject. The Federal Government produces them for the Energuide Program. If you would like a free copy, you can e-mail me at [cam.allen@sympatico.ca](mailto:cam.allen@sympatico.ca) or call my office at 1-888-523-8633. Ask for Carmen and she will mail you out a copy.

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